WHAT IS CLAIMED IS:

1. A variable-resistance element comprising a resistor and a sliding contact that slides on a surface of the resistor, the resistor comprising:

a first resistor layer comprising carbon black and a first reinforcing material dispersed in a binder resin; and

a second resistor layer comprising carbon black and a second reinforcing material dispersed in a binder resin, the second reinforcing material having a smaller average particle size than the first reinforcing material,

wherein the second resistor layer is disposed on the first resistor layer.

- 15 2. The variable-resistance element according to claim 1, wherein the average particle size of the second reinforcing material is not less than 0.1 μm but less than 1 μm .
- The variable-resistance element according to claim 2,
 wherein the second reinforcing material comprises spherical particles.
- The variable-resistance element according to claim 1,
 wherein the content of the second reinforcing material in the
 second resistor layer is 5 to 30 percent by volume.
 - 5. The variable-resistance element according to claim 1, wherein the average particle size of the first reinforcing

material is in the range of 1 to 10 $\mu\text{m}\text{.}$

6. The variable-resistance element according to claim 5,wherein the first reinforcing material comprises pulverized5 carbon fibers.